



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW307A BYPASS RATIO: 4.2
 UNIQUE ID NUMBER: 03P16PW192 PRESSURE RATIO (π_{co}): 20.2
 COMBUSTOR: TALON II
 ENGINE TYPE: MTF RATED THRUST (F_{oo}) (kN): 28.5

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	5.6	99.1	45.3	1.9
AS % OF ORIGINAL LIMIT	28.6	84.0	56.3	5.7
AS % OF CAEP/2 LIMIT (NO _x)			70.4	
AS % OF CAEP/4 LIMIT (NO _x)			70.8	
AS % OF CAEP/6 LIMIT (NO _x)			71.0	
AS % OF CAEP/8 LIMIT (NO _x)			75.0	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 x REVISED (SEE REMARKS)

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 - OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (% F_{oo})	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	0.327	0.00	0.27	18.28	0.7
CLIMB OUT	85	2.2	0.272	0.00	0.23	15.58	0.3
APPROACH	30	4.0	0.102	0.00	3.23	8.77	0.0
IDLE	7	26.0	0.044	1.99	36.92	2.86	1.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			143	137	2625	1221	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				4.8	91.6	42.8	1.7
SIGMA (D_p/F_{oo} in g/kN, or SN)				1.5	6.5	0.7	0.2
RANGE (D_p/F_{oo} in g/kN, or SN)				3.2-6.2	85.4-98.4	42-43.3	1.5-1.9

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.3-100.7
TEMPERATURE (K)	275-278
ABS HUMIDITY (kg/kg)	0.0024-0.0047

FUEL

SPEC	Jet A-1
H/C	1.86-1.87
AROM (%)	19.8-21

MANUFACTURER: Pratt & Whitney Canada
 TEST ORGANIZATION: PW307 Development Engineering
 TEST LOCATION: Mississauga, Ontario, Canada
 TEST DATES: 16/02/2012-23/02/2012

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

REMARKS

- P&WC ER 5606 revision B
- Engines tested: CH0581/01, CH0582/01, CH0583/01
- Weight reduced fuel nozzles and CCOC, aft shifted liner
- Engines CH0581 onwards incorporate this combustion system design standard
- Defined by P&WC Engineering Change E6298
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO_x levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)